



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,849	12/29/2000	Peter Graham Craven	DOL06504-US	6732

7590 12/01/2006

Gallagher & Lathrop
Suite 1111
601 California Street
San Francisco, CA 94108-2805

EXAMINER

DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
----------	--------------

2151

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,849

Applicant(s)

CRAVEN ET AL.

Examiner

KAMAL B. DIVECHA

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3, 4, 16-21, 25 and 29-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 16-21, 25, 29-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2151

Response to Arguments

Claims 3, 4, 16-21, 25, 29-50 are pending in this application.

Claims 1, 2, 5-15, 22-24, 26-28 remains cancelled.

Applicant's arguments filed September 06, 2006 have been fully considered but they are not persuasive.

In response filed, applicant argues in substance that:

- a. Motivation to combine the references does not exist (remarks, page 4, page 7).

In response to applicant's argument that the motivation does not exist, to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the motivation to combine has been clearly cited, as obtained from the references themselves.

On page 7 of remarks, Applicant states "the motivation to combine did not exist because encoding/decoding data at different rates was already known in the prior art and already existed in the systems that are disclosed in these references".

In response to this statement, Examiner would like to point out that known subject matter in the art does not necessarily mean that there is no motivation to combine the subject matter.

Art Unit: 2151

On page of remarks, Applicant states “with regard to the second alleged motivation, neither Naimpally nor Huang disclose anything about interruptions other than those caused by conventional decoder FIFO buffer overflow or underflow. Both Naimpally and Huang disclose how to control the encoding rate so that this problem does not occur. There are no other interruptions that are disclosed or suggested in either reference that would have been motivated a person to look for additional teachings”.

In response to this argument, Examiner would like to point out that applicant’s invention does implicitly control the buffer underflow and overflow by controlling the variable and fixed data streams and the data rate (see applicant’s specification, page 9 line 25 to page 10 line 26).

With respect to “other interruptions”, Examiner does not need to indicate them because the additional teachings refer by the applicant are not recited in the claims.

Examiner would like to point out that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, applicant’s argument drawn towards the distinction between the prior art and the instant claimed subject matter, based on the motivation for the combination, is not persuasive.

Art Unit: 2151

b. Even if there would have been a motivation to combine Naimpally, Huang and Lane, the combination fails to disclose or suggest determining a minimum data rate to which a packetized stream could be repacketized for successful decoding by a decoder having FIFO buffer (remarks, page 5).

In response to argument [b], Examiner respectfully disagrees in light of the followings:

Claim 1 recites:

An encoder for producing an encoded packetised stream, comprising:

means for determining a minimum data rate to which the packetised stream could be repacketised for successful decoding by a decoder having a given first-in-first-out (FIFO), buffer size; and

means for introducing into the stream control data representing the minimum data rate.

A minimum data rate is a rate that is acceptable by the decoder.

Huang clearly teaches the process of encoding a data stream at a rate, by utilizing the variable bit rate encoder, i.e. determines the rate for the best results, that would be acceptable by the decoder (see col. 5 L5-20, col. 6 L54-57, and col. 8 L58-62).

Furthermore, Huang clearly teaches the process of determining the maximum and minimum data rate usable and coding at the minimal rate (see col. 6 L27-57 and fig. 5 item #106).

Therefore, applicant's argument directed toward the distinction between the prior art and the instant claims, based on the teaching "determining minimum rate" is not persuasive, as set forth above.

Applicant should consider defining "successful decoding" in the claim more clearly because any encoder/decoder design available in the relevant art is known to encode the data stream that is acceptable by the decoder.

Art Unit: 2151

- c. Neither references discloses any details about decoders and decoding (remarks, page 7).

In response to argument [c], Examiner disagrees.

The only claims that disclose decoder/decoding in the present application are 45-50 as recited below.

Claim 45 recites:

A device for decoding variable rate data organized as a stream of packets, each packet including a corresponding decoder time stamp, the device comprising:

- a feed buffer that receives the stream of packets to mitigate any interruption in the stream of packets;
- a FIFO buffer having an input coupled to the feed buffer for receiving the stored data, and having an output; and
- a decoder having an input coupled to the output or" the FIFO butter.

Claim 46 recites:

The device of claim 45, wherein the feed buffer stores the stream until the corresponding decoder time stamp for each packet is identified.

Claim 47 recites:

The device of claim 45, wherein the variable rate data comprises losslessly compressed digital audio data.

Claim 48 recites:

The device of claim 45, wherein variable rate data comprises digital data that has, been encoded by Meridian Lossless Packing(MLP) encoder.

Claim 49 recites:

The device of claim 45, wherein the decoder is an MLP a Meridian Lossless Packing (MLP) decoder.

Claim 50 recites:

A decoder that decodes the encoded variable rate steam that includes said control data as provided by claim 25.

The only detail about decoder/decoding in the claims is that the decoder decodes the variable rate data or stream or simply decodes the data using lossless compression technique.

Art Unit: 2151

Therefore a decoder by itself is sufficient enough to be read onto the claimed subject matter because the claims does not recite any improvement to the decoders available in the art such as decoder as disclosed by Huang, see col. 8 L44-60. The encoder in Huang produces variable bit rate data stream as discussed above, and therefore the decoder described herein is able to decode the variable rate data stream.

Applicant is advised to consider amending the claims to recite "details" of the decoder in the claims, if there is an improvement thereof.

- d. The combination fails to disclose or suggest the feed buffer (remarks, page 8).

In response to argument [d], Examiner disagrees.

Claim 45 recites:

A device for decoding variable rate data organized as a stream of packets, each packet including a corresponding decoder time stamp, the device comprising:

a feed buffer that receives the stream of packets to mitigate any interruption in the stream of packets;

a FIFO buffer having an input coupled to the feed buffer for receiving the stored data, and having an output; and

a decoder having an input coupled to the output or" the FIFO butter.

Applicant argues in response, see remarks, page 8, that "the buffer 2 mentioned in the office action is part of an encoder. As explained above, claim 45 is directed toward a decoder".

Examiner would like to point out that even though the claim is intended to be directed towards a decoder, the claim does not teach that the feed buffer and the FIFO buffer is included in the decoder and/or is implemented in the decoder (see claim above).

It simply states, "...the device comprising feed buffer...FIFO buffer and a decoder..."

Art Unit: 2151

In other words, the feed buffer and the FIFO buffer are not part of the decoder, hence the buffer recited in the rejection can be fully interpreted as the feed buffer simply because it can receive the data streams.

Furthermore, applicant did mention that Yagasaki does disclose a buffer in a decoder See remarks, page 8).

Therefore it would have been obvious to a person of ordinary skilled in the art to modify Naimpally and Huang in view of Yagasaki in order to implement the buffer memory as a feed buffer by concatenating the buffer memory to the other memory.

Furthermore, the feed buffer can be a temporary storage such as a hard disk, and coupling a hard disk to the FIFO buffer or memory is known in the art (see Yagasaki, fig. 8).

Therefore, applicant argument towards the distinction between the prior art and the claimed subject matter, based on this point is not persuasive.

As such, the REJECTION IS MAINTAINED.

Art Unit: 2151

Detailed Action

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file, however the documents are incomplete, i.e. does not include the full description of the invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 3,4,16-21, 25,29,31-33,45-50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-54 of U.S. Patent No. 6,023,233 issued to Craven et al.(Craven) in view of US Patent 5,617,145 issued to Huang et al.(Huang).

US Patent 6,023,233 issued to Craven teaches all the limitations of the claimed invention in the instant application except the process of determining a minimum data rate. Craven however, suggest the use of predetermined data rate.

Art Unit: 2151

For example: claim 1 of Craven discloses the process of encoding stream of data at variable data rate; Claim 4 teaches the process of lossless compression; Claim 29 of Craven discloses a decoder; claim 27 discloses a peak data rate.

Claims 3, 25, 45 of present application disclose encoder/decoder for encoding/decoding variable rate stream; claim 17 discloses a peak data rate; claim 21 discloses lossless compression technique.

Huang explicitly teaches the process of determining minimum data rate (col.6, lines 59- col.7, line 45 and as discussed above).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Craven use a minimum data rate taught by Huang in order to encode/decode data.

One ordinary skill in the art at the time of the invention would have been motivated to combine the teaching of Craven and Huang in order to provide a process of encoding/decoding data at different data rates.

Applicant is advised to take an appropriate action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,4,16-18,21, 25,29,31,32,50 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,619,337 issued to Naimpally in view of US Patent 5,617,145 issued to Huang et al.(Huang) in further view of US 5,377,051 issued to Lane et al.(Lane).

As per claim 3, 25, Naimpally teaches an encoder for producing an encoded packetised stream (Abstract), including comprising :
means for determining data rate to which the packetised stream could be decoded having given first-in-first-out (FIFO) buffer size(col.5, lines 42-62); and

Naimpally however does not explicitly teach determining a minimum data rate and introducing control data into the encoded variable rate stream, the control data representing the minimum.

Huang teaches determining a minimum data rate and introducing control data into the encoded variable rate stream, the control data representing the minimum (col.6, lines 59-col.7, line 45).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Naimpally to determining a minimum data rate and introducing control data into the encoded variable rate stream, the control data representing the minimum as taught by Huang in order to encode/decode data.

Art Unit: 2151

One ordinary skill in the art at the time of the invention would have been motivated to combine the teaching of Naimpally and Huang in order to provide a process of encoding/decoding data at different data rates (col. 2 L10-44, col. 6 L54-57, col. 8 L44-65).

Naimaply in view of Huang does not explicitly teach repacketised data.

Lane explicitly teaches repacketised data (col.50, lines 41-48).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Naimpally in view of Huang to explicitly teach repacketised data as taught by Lane in order for a decoder to recognize a stream of data packets (Lane, col.50, lines 41-48).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Naimpally, Huang, and Lane to provide a system to recognize a stream of data packets (Lane, col.50, lines 41-48).

As per claim 4, 29,47 wherein the encoded stream is losslessly compressed digital audio data (Naimpally, col.1, lines 35-67).

As per claim 16, A mastering system comprising the encoder as claimed in claim 3 (Naimpally, Fig.1-3).

As per claim 17, a system comprising a mastering system as claimed in claim 16, and means for repacketising the data to form, a stream having a peak data rate calculated in dependence upon the control data (Huang, Figs.2-9). Motivation to combine set forth in claim 3.

As per claim 18, a system as claimed in claim 17, wherein the stream having a peak data rate corresponding to the control data comprises a fixed rate stream (Huang, col.2, lines 34-44). Motivation to combine set forth in claim 3.

Art Unit: 2151

As per claim 21, a system as claimed in any one of claims 17 to 20, wherein the encoder comprises an MLP lossless encoder for audio data (Naimpally, col.3, lines 31-60).

As per claim 31, the data processing method of claim 25, further comprising processing the control data to determine an adequate bandwidth for transmission of the encoded variable rate stream, and transmitting the encoded variable rate stream over an interface having at least the adequate bandwidth (Huang, col.1, lines 39-56). Motivation to combine set forth in claim 3.

As per claim 32, the data processing method of claim 31 wherein the interface operates at a fixed data rate (Huang, col.1, lines 39-56). Motivation to combine set forth in claim 3.

As per claim 50, a decoder that decodes the encoded variable rate stream that includes said control data as provided by claim 25 (Naimpally, Abstract, col.5, lines 42-61).

Claims 19,20,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,619,337 issued to Naimpally in view of US Patent 5,617,145 issued to Huang et al.(Huang) in further view of US 5,377,051 issued to Lane et al.(Lane) in further view of US Patent 6,009,229 issued to Kawamura.

Naimpally in view of Huang in further view of Lane teaches all the limitations of claim 3,25, however, does not explicitly teach as per claim 19, 20, 33 a system for providing encoded data to a DVD comprising a mastering system and means for writing the control data onto the disc with the encoded data and a mastering system and an authoring system, the authoring system including an encoder.

Kawamura teaches a system for providing encoded data to a DVD comprising a mastering system as claimed in claim 16, and means for writing the control data onto the disc

Art Unit: 2151

with the encoded data and a mastering system and an authoring system, the authoring system including an encoder (Figs. 1-22,col.1, lines 14-col.2, lines 23).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teaching of Naimpally in view of Huang in further view of Lane to use a DVD to encode data as taught by Kawamura in order to store more data than that of other media.

One ordinary skill in the art would have been motivated to combine the teachings of Naimpally, Huang, Lane, and Kawamura in order to provide a process to encode MPEG files on a DVD.

Claims 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,619,337 issued to Naimpally in view of US Patent 5,617,145 issued to Huang et al.(Huang) in further view of US Patent 5,675,383 issued to Yagasaki et al.(Yagasaki).

As per claim 45, Naimpally teaches a device for decoding variable rate data organized as a stream of packets, each packet including a corresponding decoder time stamp (Abstract), the device comprising: a FIFO buffer having an input coupled to the feed buffer for receiving the stored data, and having an output (Abstract, col.1, lines 21-34); and a decoder having an input coupled to the output of the FIFO buffer (Abstract, col.1, lines 21-34).

Naimpally however does not explicitly teach a buffer that receives the stream of packets to mitigate any interruption in the stream of packets.

Huang teaches a buffer that receives the stream of packets to mitigate any interruption in the stream of packets (Abstract, Fig.1-9).

Art Unit: 2151

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Naimpally to a feed buffer that receives tire stream of packets to mitigate any interruption in the stream of packets as taught by Huang in order to encode/decode data.

One ordinary skill in the art at the time of the invention would have been motivated to combine the teaching of Naimpally and Huang in order to provide a process of encoding/decoding data at different data rates (col. 2 L10-44, col. 6 L54-57, col. 8 L44-65).

Naimpally in view of Huang does not explicitly teach a feed buffer.

Yagasaki explicitly teach a feed buffer (Fig.1, element 2).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Naimpally in view of Huang to explicitly teach a feed buffer as taught by Yagaski in order to operate as FIFO memory (Yagasaki, col.2, lines 15-18).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Naimpally, Huang, and Yagasaki in order to provide a system capable of implementing a FIFO memory (Yagasaki, col.2, lines 15-18).

As per claim 46, the device of claim 45, wherein the feed buffer stores the stream until the corresponding decoder time stamp for each packet is identified (Naimpally, Abstract).

As per claim 47, wherein the encoded stream is losslessly compressed digital audio data (Naimpally, col.1, lines 35-67).

As per claim 48, wherein the encoder comprises an MLP lossless encoder for audio data (Naimpally, col.3, lines 31-60).

Art Unit: 2151

As per claim 49, the device of claim 45, wherein the decoder is an MLP decoder (Naimpally, Abstract).

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Blomfield-Brown et al., US 5,742,773: Method and System for Audio compression.
- Dye, US 6,173,381 B1: Data compression and Decompression.
- Carmel et al., US 6,389,473 B1: Network Media Streaming.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2151

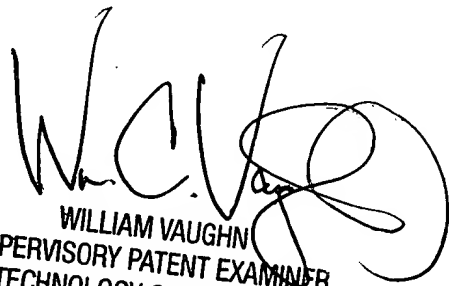
Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kamal Divecha
Art Unit 2151
November 21, 2006.



WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100